

REMARKS

Applicant appreciates the thorough examination of the present application as evidenced by the Final Office Action of April 17, 2007. Applicant respectfully submits that the pending claims are in condition for allowance for at least the reasons discussed herein. Thus, reconsideration and allowance are respectfully requested in due course.

Response to Arguments

Claims 6-9 and 12-15 stand rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent Application Publication No. 2004/0063456 to Griffin (hereinafter "Griffin"). *See* Final Office Action, page 3. Claims 10 and 16 stand rejected under 35 U.S.C. §103 as being unpatentable over Griffin in view of United States Patent No. 5,046,103 to Warnaka (hereinafter "Warnaka"). *See* Final Office Action, page 4. Claims 11 and 17 stand rejected under 35 U.S.C. §103 as being unpatentable over Griffin and Warnaka in further view of United States Patent No. 5,251,262 to Suzuki (hereinafter "Suzuki"). *See* Final Office Action, page 5. As the previous rejections have been maintained, Applicant respectfully submits that the pending claims are patentable for at least the reasons discussed in Applicant's Amendment of February 28, 2007. Applicant will not repeat those arguments herein in the interest of brevity, however, the arguments are incorporated herein by reference as if set forth in their entirety. Applicant will limit the present response to responding to the Response to Arguments Section on page 2 of the Final Office Action.

The Final Office Action states:

The examiner believes that applicant tries to claim a mobile terminal has a speaker with a microphone for picking up noise and another microphone for picking up the voice energy from a user. During the first mode in which a speaker operation mode, **the microphone for picking up noise is turned off (see page 13, lines 15-20).** **Thus, the microphone for picking up noise is not used during the first mode.** During the second mode in which is mic. mode wherein both microphones are operation for optimizing the receiving of human voice. **From examiner point of view, it is basic a process of noise cancellation for the mic. mode. So the Griffin reference clearly teaches a wireless device comprising a speaker (item 14a) with a noise microphone (item 48) and another microphone (14d) for human voice.** **Based on the structure, it is clear that the speaker is utilized for alerting user for incoming all or voice communication from another end as the first mode.** The association of microphone and noise microphone are clearly taught in paragraph 33 in which to provide a higher quality speech signal from the user end. In addition, since the applicant does not claim "without two microphones" (see applicant's remark, page 8), the argument regarding to this feature is moot. Therefore, based on the foregoing reasoning, the previous rejection is maintained.

See Final Office Action, page 2 (emphasis added). Applicant respectfully disagrees with the Examiner's point of view as set out above.

In particular, the Final Office Action points to page 13, lines 15-20 of the specification of the present application to support the statements in the Final Office Action. The entire paragraph of the specification from which this citation is taken states:

If voice activity is detected (block 540) above a certain threshold at the microphone, the speaker/microphone may be configured to operate as a microphone (block 550). Sound energy may be received at the microphone and the speaker/microphone in the second mode of operation. It will be understood that the microphone and speaker/microphone (first and second transducers) may receive the sound energy created by, for example, a human voice, at different times and with different amplitudes, as one of the transducers may be positioned closer to the source of the sound energy, for example, a user's mouth. A multi-mode audio processor circuit may receive the sound energy from the first and second transducers at first and second microphone inputs, respectively, and combine first and second audio signals produced from the sound energy received by the first and second transducers, respectively, in the second mode of operation (block 560). A single noise-attenuated audio signal may be generated based on the combined first and second audio signals (block 570). **On the other hand, when voice activity is not detected at the microphone (block 540), the speaker/microphone may operate as a speaker in the first mode of operation (block 545) and the path of the microphone may be disabled until voice activity is detected.**

See Specification, page 13, lines 5-21. In other words, the speaker/microphone **is a single physical device** that operates as a microphone in one mode of operation and as a speaker in another mode. For example, independent Claim 6 recites, in part:

wherein the speaker comprises a transducer and wherein the multi-mode audio processor circuit is configured to transmit sound from the transducer in a first mode of operation and to generate a composite audio signal from sound energy received by the microphone and the transducer in a second mode of operation.

Thus, the transducer operates as speaker in the first mode of operation and microphone in the second mode of operation. Independent Claim 12 contains similar recitations (configured to operate the transducer as a speaker during a first mode of operation and a microphone during a second mode of operation). Providing a single device that provides two operations may allow the device in which the speaker/microphone is included to be made smaller according to some embodiments of the present invention.

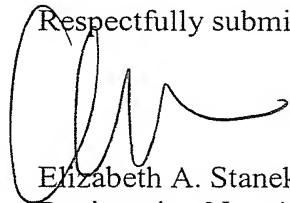
In stark contrast, the Final Office Action points to two devices as providing the teachings of the single speaker/microphone (transducer) as recited in Claim 6 of the present

application. In particular, the Final Office Action points to a microphone 14d and a speaker 14a of Figure 4 of Griffin as providing the teachings of the microphone/speaker device as recited in independent Claim 6. *See* Office Action, page 2. The provision of a microphone 14d and a speaker 14a in Griffin used in combination with a background noise microphone 48 of Griffin, does not provide a device with dual modality (speaker and microphone) as recited in independent Claims 6 and 12 of the present application. Accordingly, Applicants respectfully submit that Claims 6-17 are patentable over Griffin for at least these additional reasons.

CONCLUSION

Applicant submits that the pending claims are in condition for allowance for at least the reasons discussed above. Favorable reconsideration of this application is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,

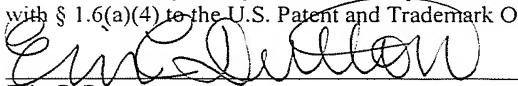


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Erin C. Dutton